

CASE STUDY SERIES**The International Atomic Energy Agency's Decision to Find Iran in Non-Compliance, 2002–2006**

Nima Gerami and Pierre Goldschmidt



Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE DEC 2012		2. REPORT TYPE		3. DATES COVERED 00-00-2012 to 00-00-2012	
4. TITLE AND SUBTITLE The International Atomic Energy Agency's Decision to Find Iran in Non-Compliance, 2002-2006				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National Defense University, Center for the Study of Weapons of Mass Destruction, 260 5th Avenue SW Bldg 64 Ft. Lesley J. McNair, Washington, DC, 20319				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 42	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Center for the Study of Weapons of Mass Destruction

National Defense University

DR. JOHN F. REICHART

Director

DR. W. SETH CARUS

Deputy Director, Distinguished Research Fellow

Since its inception in 1994, the Center for the Study of Weapons of Mass Destruction (WMD Center) has been at the forefront of research on the implications of weapons of mass destruction for U.S. security. Originally focusing on threats to the military, the WMD Center now also applies its expertise and body of research to the challenges of homeland security. The center's mandate includes research, education, and outreach. Research focuses on understanding the security challenges posed by WMD and on fashioning effective responses thereto. The Chairman of the Joint Chiefs of Staff has designated the center as the focal point for WMD education in the joint professional military education system. Education programs, including its courses on countering WMD and consequence management, enhance awareness in the next generation of military and civilian leaders of the WMD threat as it relates to defense and homeland security policy, programs, technology, and operations. As a part of its broad outreach efforts, the WMD Center hosts annual symposia on key issues bringing together leaders and experts from the government and private sectors. Visit the center online at www.ndu.edu/WMDCenter/.

Cover: IAEA Director General Mohamed ElBaradei before start of regular Board of Governors meeting, Vienna, June 15, 2009.

Photo courtesy of IAEA ImageBank (Dean Calma)

**The International Atomic Energy Agency's
Decision to Find Iran in Non-Compliance,
2002–2006**

The International Atomic Energy Agency's Decision to Find Iran in Non-Compliance, 2002–2006

by Nima Gerami and Pierre Goldschmidt

*Center for the Study of Weapons of Mass Destruction
Case Study 6*

Case Study Series General Editor: Paul I. Bernstein



National Defense University Press
Washington, D.C.
December 2012

Opinions, conclusions, and recommendations expressed or implied within are solely those of the contributors and do not necessarily represent the views of the Defense Department or any other agency of the Federal Government. Cleared for public release; distribution unlimited.

Portions of this work may be quoted or reprinted without permission, provided that a standard source credit line is included. NDU Press would appreciate a courtesy copy of reprints or reviews.

First printing, December 2012

NDU Press publications are sold by the U.S. Government Printing Office. For ordering information, call (202) 512-1800 or write to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C 20402. For the U.S. Government On-Line Bookstore go to: www.access.gpo.gov/su_docs/sale.html.

For current publications of the Institute for National Strategic Studies, consult the National Defense University Web site at: www.ndu.edu.

Contents

Introduction	1
IAEA Nuclear Inspections Begin.....	2
Nuclear Bargaining: Europe-Iran Negotiations.....	5
The Tehran Joint Declaration Collapses.....	8
New Suspicions Emerge.....	9
Nuclear Negotiations Resume: The Paris Agreement.....	11
Toward a Formal Finding of Non-Compliance.....	11
The Aftermath: Referral to the UN Security Council.....	14
Epilogue	15
Appendix 1: An Overview of the IAEA.....	17
Appendix 2: Chronology of Key Events (2002–2006)	18
Notes	21
About the Authors.....	29

Introduction

On August 14, 2002, at a press conference in Washington, DC, the National Council of Resistance of Iran (NCRI), an exiled Iranian opposition group, drew worldwide attention when it publicly accused Iran of clandestinely developing nuclear weapons. Alireza Jafarzadeh, then-U.S. media spokesperson for the NCRI, described two “top secret” nuclear facilities being constructed in Iran at Natanz and Arak under the guise of front companies involved in the procurement of nuclear material and equipment.¹ Noting that media attention had focused on Iran’s publicly declared civilian facilities, Jafarzadeh claimed that “in reality, there are many secret nuclear programs at work in Iran without knowledge of the International Atomic Energy Agency (IAEA),” the international body responsible for verifying and assuring compliance with safeguards obligations under the 1968 Nuclear Non-Proliferation Treaty (NPT).²

Nearly 3 months before the NCRI’s press conference, the U.S. Government reportedly briefed the IAEA on Iran’s clandestine nuclear activities.³ The IAEA had received briefings from several member states since the early 1990s that indicated possible undeclared nuclear activities in Iran. Yet IAEA inspectors needed Iranian authorities to provide physical access to any suspected sites in order to verify the absence of undeclared nuclear material and activities. The public revelations of Iran’s clandestine nuclear activities in 2002 unleashed one of the most intensive and highly publicized inspections in the history of the IAEA. In the shadow of the political divisions wrought by the U.S.-led military campaign against Iraq, the IAEA Board of Governors—the Agency’s main policymaking body composed of 35 member states—delayed the decision to find Iran in non-compliance with its NPT safeguards agreement.⁴

The process for determining non-compliance depends on the technical and legal findings of the IAEA Secretariat—the Agency’s technical arm—and the political judgments made by the IAEA Board. However, the lack of an established definition of non-compliance makes the decisionmaking process one of the most challenging tasks faced by the IAEA, which has a statutory obligation to report non-compliance to the UN Security Council (UNSC) and the General Assembly.⁵ Since the IAEA was first established in 1957, the Agency’s Board of Governors traditionally made its decisions based on a rule of consensus widely celebrated as the “Spirit of Vienna.” All previous safeguards violations were routinely reported as non-compliance by the IAEA to the UNSC (Iraq in 1991, Romania in 1992, and North Korea in 1993 and 1994). In the case of Iran, it took more than 2 years for the IAEA Board to reach a formal finding of non-compliance. This case study examines the IAEA’s approach to determining non-compliance with NPT safeguards agreements, as exemplified by past experience with Iran, and addresses the following questions: How did the IAEA decide

to find Iran in non-compliance and refer the case to the UNSC? Who were the primary actors involved and how did they seek to advance their positions? How did the internal politics of the IAEA and changing geopolitical circumstances shape the Agency's decisionmaking process?

IAEA Nuclear Inspections Begin

On September 16, 2002, at the 46th annual IAEA General Conference in Vienna, Gholam Reza Aghazadeh, vice president of Iran and president of the Atomic Energy Organization of Iran (AEOI), made the first statement to address the country's nuclear activities since the NCRI's press conference: "Iran is embarking on a long-term plan, based on the merits of energy mix, to construct nuclear power plants with a total capacity of 6,000 MWe [megawatts electric] within two decades."⁶ On the sidelines of the conference, IAEA Director General Mohamed ElBaradei met with Aghazadeh and asked him to confirm allegations that Iran was building an underground nuclear-related facility at Natanz and a heavy water production plant at Arak. Aghazadeh replied that Iran would "clarify everything" and agreed to a visit by an IAEA inspection team to the two suspected sites in October 2002, as well as to a meeting with the President of Iran, Mohammad Khatami, to discuss the country's nuclear development plans.⁷

After postponing the promised visit for 4 months, Aghazadeh invited ElBaradei, accompanied by IAEA safeguards officials, to Iran during the third week of February 2003.⁸ At the meeting in Tehran, Aghazadeh and other Iranian authorities admitted to the IAEA that the facility under construction at Natanz was a uranium enrichment plant. They also confirmed that a heavy water production plant was under construction at Arak. The next day, the IAEA inspection team visited Natanz and found two main facilities: an above ground centrifuge pilot fuel enrichment plant ready to begin operation, and a large underground facility intended to host a fuel enrichment plant with a design capacity of more than 50,000 centrifuges. In addition, IAEA inspectors verified that Iran had imported previously undeclared quantities of uranium hexafluoride (UF₆)—the feedstock for enrichment—and other uranium compounds. Some of this material had been secretly converted to uranium metal, which can be used as fuel for certain types of reactors that did not exist in Iran, but is also a stepping stone to converting high-enriched uranium (HEU) into metal, which is the form used in nuclear weapons.

In continued discussions with Iranian authorities, IAEA inspectors inquired about the possible conduct of enrichment activities at a workshop belonging to the Kalaye Electric Company in Tehran, one of the front companies the NCRI claimed Iran was using to procure centrifuges under the guise of a watch manufacturing company. Senior Iranian officials insisted that

International Atomic Energy Agency

The IAEA was established in 1957—13 years before the entry-into-force of the Nuclear Non-Proliferation Treaty (NPT)—as the world’s center of scientific and technical cooperation in the peaceful uses of nuclear energy. The Agency’s relationship with the United Nations (UN) is regulated by special agreement; it reports annually to the UN General Assembly and, when appropriate, can report directly to the Security Council regarding states’ compliance with their NPT safeguards agreements, as well as on matters relating to international peace and security.

Safeguards and Verification

The IAEA is widely recognized as the sole competent authority responsible for verifying and assuring the compliance of NPT state parties with their safeguards agreements through the application of international safeguards. Verification measures include on-site inspections, visits, and ongoing monitoring and evaluation. The NPT requires all non-nuclear-weapon states to conclude a “full-scope” or Comprehensive Safeguards Agreement with the IAEA. Some states have also voluntarily concluded an Additional Protocol to their safeguards agreements, which grants the IAEA complementary verification authority or expanded rights of access to information and locations. The Model Additional Protocol (IAEA Information Circular 540), approved by the IAEA Board in 1997, has not been universally adopted by IAEA member states. Without an Additional Protocol in force, the Agency is unable to provide credible assurance regarding the absence of undeclared nuclear material and activities in states that have concluded Comprehensive Safeguards Agreements.

Member States (as of November 2012): 157

Safeguards Agreements (in force): 180 states

Additional Protocols (in force): 119 states

Safeguards Activities (as of December 2009): 1,125 facilities worldwide

Non-Compliance

Although the NPT itself does not provide procedures for determining non-compliance, Articles III.B.4 and XII.C of the IAEA Statute describe what the Agency should do if a member state is found to be in non-compliance with its NPT safeguards agreement. In addition, paragraph 19 of the Model Comprehensive Safeguards Agreement (IAEA Information Circular 153) empowers the IAEA Board to find a state in non-compliance if “the Agency is not able to verify that there has been no diversion of nuclear material” to weapons purposes.

Source: www.iaea.org/OurWork/SV/Safeguards/sv.html

they had not intended to hide anything from the IAEA, but they adamantly refused to provide inspectors access to the Kalaye Electric workshop or to take environmental samples there.⁹ They argued that Iran had no legal obligation to inform the Agency of its new nuclear facilities until 180 days before the introduction of nuclear material, based on a provision of the Subsidiary Arrangements to its safeguards agreement known as “Code 3.1.” Until February 2003, Iran was the last state with significant nuclear activities to adopt a modified Code 3.1, which requires states to provide the IAEA design information on a new nuclear facility as soon as the decision is made to begin construction.¹⁰ However, the presence of a centrifuge cascade in the Natanz pilot enrichment plant led IAEA inspectors to doubt Iranian claims that they had not introduced nuclear material into any facility for testing purposes. Doing so without first informing the IAEA would have constituted a violation under the terms of the original Code 3.1 of Iran’s safeguards agreement. In his 2011 memoir, ElBaradei observed, “I realized early on that we were dealing with people who were willing to deceive to achieve their goals and that we should not accept any attestation without physical verification.”¹¹

On June 6, 2003, ElBaradei reported to the IAEA Board of Governors that Iran had failed to meet its safeguards obligations but was in the process of taking corrective actions and had signed the modified Code 3.1. When the IAEA Board met June 16–20 to take stock of ElBaradei’s initial assessment, the United States lobbied other Board members to immediately find Iran in non-compliance and report the matter to the UNSC. ElBaradei issued his own appeal: the IAEA’s verification work in Iran is a “work in progress,” he said.¹² A successful outcome depended on the ability of inspectors to carry out environmental samples at Kalaye Electric and elsewhere to verify the absence of undeclared nuclear material. In taking note of ElBaradei’s remarks, the Chairperson of the IAEA Board, Ambassador Nabeela Al-Mulla of Kuwait, called on Iran to “cooperate fully” with the IAEA and urged it to “promptly and unconditionally” conclude an Additional Protocol to its safeguards agreement.¹³ An Additional Protocol would allow IAEA inspectors expanded rights of access to information and locations that were critical for understanding the nature of Iran’s nuclear activities.

Between June and September 2003, IAEA inspectors traveled to Iran at least five times to visit nuclear facilities, meet with senior Iranian officials, and receive additional information on the history, extent, and purpose of Iran’s nuclear program.¹⁴ Faced with repeated inquiries by the IAEA, Iran began to permit inspectors piecemeal access to sites and allowed them to take environmental samples at certain key facilities. Yet when visiting the Kalaye Electric workshop to collect samples for the first time, inspectors noted that “considerable modification” had been made to the premises before the visit that would affect the accuracy of their analysis.¹⁵ IAEA

inspectors later discovered that centrifuges had in fact been tested there with undeclared nuclear material, which constituted a clear violation of Iran's safeguards agreement.¹⁶ Other serious discrepancies and questions continued to surface. Among other anomalies, environmental samples taken from centrifuges at the Natanz pilot enrichment plant indicated the presence of HEU particles, which was inconsistent with Iran's previous declarations. Iranian authorities explained that the HEU must have originated from centrifuge components acquired through foreign intermediaries from abroad.

Ahead of the IAEA Board's scheduled meeting September 8–12, ElBaradei reported that Iran had been slow to grant inspectors full access to requested locations and that "some of the information was in contrast to that previously provided by Iran."¹⁷ On that basis, the Board adopted a resolution on September 12—cosponsored by Australia, Canada, and Japan—that called on Iran to "suspend all further uranium enrichment-related activities, including the further introduction of nuclear material into Natanz," and declared that Iran needed to remedy all safeguards failures by the end of October 2003.¹⁸ The U.S. Ambassador to the IAEA, Kenneth Brill, argued that "the facts already established" justified an immediate finding of non-compliance by Iran with its safeguards obligations.¹⁹ However, with its influence constrained by the international reaction to its handling of the war in Iraq, the United States backed away from insisting that the IAEA Board declare Iran in non-compliance and agreed instead "to give Iran a last chance to stop its evasions."²⁰ The Iranian delegates were infuriated by the IAEA Board's October ultimatum and walked out of the meeting. Iranian Ambassador Ali Akbar Salehi demanded that the IAEA Board resist U.S. pressure to refer Iran to the UNSC: "It is no secret that the current U.S. administration . . . entertains the idea of invasion of yet another territory, as they aim to re-engineer and reshape the entire Middle East."²¹

Nuclear Bargaining: Europe-Iran Negotiations

The invasion of Iraq created deep divisions between the United States and some of its European allies that significantly influenced the parties' views on how to deal with Iran's safeguards violations. In diplomatic circles, Western European states, as well as China and Russia, who were veto-wielding permanent members of the UNSC, feared that a non-compliance finding and referral to the UNSC could escalate the crisis and be used by the United States as a pretext to launch another war in the Middle East. Having supported the more aggressive U.S. lead during the beginning phase of the IAEA inspection process, in October 2003, France, Germany, and the United Kingdom—the so-called E-3—intensified efforts to encourage Iran to accelerate its cooperation with the IAEA and avert a crisis with the United States.²²

Behind the scenes, the E-3 foreign ministers—Dominique de Villepin of France, Joschka Fischer of Germany, and Jack Straw of the United Kingdom—were negotiating with Hassan Rouhani, Secretary of Iran’s Supreme National Security Council and the chief nuclear negotiator, to strike a compromise over Iran’s nuclear program. After several hours of talks in Tehran on October 21, the E-3 foreign ministers announced that they had secured an agreement with Iran just days before the IAEA Board’s October 31 deadline.²³ Iran stated in the agreement, known as the Tehran Joint Declaration, that having received the necessary clarifications, it had decided to sign and implement the Additional Protocol to its safeguards agreement. It further stated that it would “voluntarily suspend all uranium enrichment and reprocessing activities as defined by the IAEA” as a confidence-building measure.²⁴ In return for Iran’s disclosures, transparency, and cooperation with the IAEA, the E-3 agreed to recognize Iran’s right to peaceful nuclear energy in accordance with the NPT and to “open the way to a dialogue on a basis for longer term cooperation” with Iran. The E-3 foreign ministers also informed Iranian authorities that, “in their view, full implementation of Iran’s decisions, confirmed by the IAEA’s Director General, should enable the immediate situation to be resolved by the IAEA Board,” rather than reporting the matter to the UNSC.²⁵

In their effort to conclude the Tehran Joint Declaration in October, the E-3 foreign ministers deviated from the terms of the resolution adopted by the IAEA Board in September, which called on Iran to “suspend all further uranium *enrichment-related* activities.”²⁶ According to ElBaradei, the problem was that the E-3 foreign ministers and their Iranian counterparts could not agree on how exactly to define the scope of enrichment activities to be suspended.²⁷ Meeting one-on-one with Iranian negotiator Rouhani just 4 days before the Tehran Joint Declaration was concluded, ElBaradei made clear his own view that to comply with the IAEA’s suspension requirements, Tehran would have to suspend the introduction of UF₆ into centrifuges.²⁸ This privately communicated definition of suspension, which was more restrictive than the language used by the IAEA Board, was apparently not known to the E-3 foreign ministers and indeed was not made public at the time. And since the E-3 foreign ministers sought a broad definition of suspension to serve as a confidence-building measure in any case, the Tehran Joint Declaration was not explicit on the IAEA’s technical definition of suspension.²⁹ Because of this ambiguity, disagreements over the scope of “enrichment and reprocessing activities” persisted, and Iran continued to test its uranium conversion processes, including those that produced UF₆, until 2004.

Nevertheless, the October 2003 Tehran Joint Declaration represented a watershed moment in the IAEA’s investigation of Iran’s nuclear program. Two days after the agreement was announced,

ElBaradei received a letter from AEOI chief Aghazadeh declaring that Iran was “commencing a new phase of confidence and cooperation.”³⁰ The letter admitted to many activities that Iran previously denied, including the testing of centrifuges with nuclear material at the Kalaye Electric workshop and the use of additional undeclared nuclear material in some 113 uranium conversion experiments carried out between 1995 and 2000.³¹ In a statement to the press, ElBaradei welcomed Iran’s decision to provide a more comprehensive picture of its nuclear fuel cycle activities. He also encouraged Iran to conclude an Additional Protocol to ensure that both its declared and undeclared nuclear activities were placed under IAEA safeguards. The United States, which was in close contact with the E-3, reacted cautiously to the outcome of the Tehran Joint Declaration, calling it a “positive step” if Iran were to comply with the agreement.³²

On November 10, 2003, ElBaradei submitted the findings of the Agency’s verification work in Iran to the IAEA Board. Based on Iran’s latest declarations, he stated that Iran had nearly mastered the complete front end of the nuclear fuel cycle—the process of enriching uranium, which has both civilian and weapons applications—and had concealed a uranium centrifuge enrichment program for 18 years and a laser enrichment program for 12 years. Iran’s industrial-scale enrichment capability was based largely on the production of gas centrifuges, but it had also conducted laboratory-scale experiments with laser isotope separation techniques to enrich uranium. Iran admitted that “it [had] produced small amounts of LEU [low-enriched uranium] using both centrifuge and laser enrichment processes, and that it had failed to report a large number of conversion, fabrication and irradiation activities involving nuclear material, including the separation of a small amount of plutonium.”³³ ElBaradei concluded, however, that “there is no evidence that the previously undeclared nuclear material and activities . . . were related to a nuclear weapons program.”³⁴ The use of the term *non-compliance* was carefully left out to avoid referral of Iran to the UNSC for possible sanctions and other measures to enforce compliance. “In the case of Iran,” ElBaradei later observed, “I had long been careful to avoid using the word *noncompliance*, opting instead for synonyms such as *breach* or *violation*, so as not to prejudice the Board.”³⁵

The United States was not pleased with ElBaradei’s failure to explicitly cite non-compliance. U.S. Ambassador Kenneth Brill sharply rebuked the IAEA for “dismissing important facts that had been disclosed by its own investigation as irrelevant to the question of whether Iran has a nuclear weapons program.”³⁶ Although the United States wanted to refer Iran to the UNSC—as a strict application of its safeguards agreement required—China, Russia, and the 118-member Non-Aligned Movement (NAM) preferred to throw their weight behind the Tehran Joint Declaration in hopes of resolving the nuclear dispute at the IAEA. In September 2003, the NAM

announced the creation of a Vienna Chapter, which coincided with Iran's nuclear dossier being brought before the IAEA.³⁷ The Vienna Chapter provided Iran a useful instrument for influencing the NAM's positions on nuclear issues and engineering diplomatic stalemates within the IAEA Board to avoid referral to the UNSC.³⁸

The Tehran Joint Declaration Collapses

Optimism surrounding the Tehran Joint Declaration faded quickly. A month after signing the Additional Protocol in December 2003, Iran had to acknowledge that it received an extensive set of drawings for an advanced type of centrifuge known as the P-2 from Pakistan, in 1994. Iran neglected to include these drawings and related research and development activities in its October 2003 declaration. In addition, concerns over the nature and scope of Iran's activities were heightened by the Libyan Government's decision in December 2003 to voluntarily disclose and dismantle its nuclear program, which revealed that Libya had ordered thousands of P-2 centrifuges from the global nuclear black market run by A.Q. Khan, the self-described father of Pakistan's nuclear bomb.³⁹ Subsequent investigations by the IAEA into this issue uncovered substantial cooperation between the A.Q. Khan network and Iran involving the provision of blueprints for P-2 centrifuges and other technology found in Libya. Since Libya had obtained a nuclear warhead design from the A.Q. Khan network, the fear was that Iran could have done likewise.

Another major outstanding issue was the origin of low- and high-enriched uranium contamination found not only at the Kalaye Electric workshop in Tehran, but also at Natanz. In February 2004, ElBaradei reported to the IAEA Board that Iran was still slow to provide requested information regarding the origin of the contaminated centrifuge components at its nuclear facilities. Absent this information, the IAEA was unable to fully assess the nature and scope of Iran's nuclear program. A split emerged among Western members of the Board. The United States, joined by Australia, Canada, and Japan, called for the inclusion of stronger language condemning Iran. The E-3, however, opted for milder wording so as "not to upset the applecart," according to diplomats who took part in the meeting.⁴⁰ Reporting Iran for non-compliance to the UNSC remained a red line that the E-3 governments did not wish to cross. In an unprecedented step, the United States and Iran privately sent messages to ElBaradei requesting his assistance to draft language for the Board's resolution after its meeting in March 2004—the third such resolution since the IAEA's investigation began in 2003.⁴¹ "In the end," ElBaradei recounted, "everyone signed off on a consensus resolution that pleased both the Iranians and the Americans."⁴² The Board deferred a formal finding of non-compliance until June 2004 to

consider progress in verifying Iran's October 2003 declaration regarding the origin of centrifuge contamination and Pakistan's involvement in the supply of centrifuge designs.⁴³ This move represented both a concession by Washington and a defeat for Tehran, which had sought to have its nuclear dossier removed altogether from the IAEA Board's agenda.

By the time the IAEA Board met in June 2004, the tables had turned. The information provided by Iran was deemed insufficient by IAEA inspectors, who were unable to resolve questions about the origin of LEU and HEU contamination. Confronted with mounting evidence from Libya regarding the A.Q. Khan network, Iran admitted to inspectors that, contrary to its earlier statements, it had imported magnets suitable for use in P-2 centrifuges from Asian suppliers and attempted to purchase some 4,000 magnets from a European intermediary, with promises of larger orders to follow.⁴⁴ "Clearly, this pattern of engagement on the part of Iran is less than satisfactory," ElBaradei said at the IAEA Board meeting. "It is essential for the integrity and credibility of the inspection process that we are able to bring these issues to a close within the next few months."⁴⁵

Nearly 2 years after the NCRI's public revelations prompted IAEA inspections in Iran, patience on the IAEA Board was wearing thin. In response to the lack of progress, the Board unanimously adopted a resolution, this time drafted by the E-3, that "deplored" Iran's lack of "full, timely, and proactive" cooperation, but did not set a new deadline for complying with the IAEA's requests. Although much of this draft remained in the final resolution adopted on June 18, the NAM insisted on adding a preambulatory clause recognizing the "inalienable right" of states to the development and practical application of atomic energy for peaceful purposes, thereby deflecting focus from Iran's safeguards transgressions.⁴⁶ Ambassador Hussein Haniff of Malaysia, acting in his capacity as Chairperson of the NAM, issued a statement calling for the "prompt closure" of the IAEA investigation of Iran's nuclear program and its removal from the IAEA Board's agenda.⁴⁷ Iran, on the other hand, accused the E-3 of caving into American "bullying" by drafting the stern resolution.⁴⁸ Within days, Iran informed the IAEA that it would remove Agency seals on centrifuge-related equipment and restart the fabrication and testing of centrifuges.⁴⁹ The October 2003 Tehran Joint Declaration, which had obtained the partial suspension of Iran's enrichment activities, had now collapsed.

New Suspicions Emerge

By the fall of 2004, new information emerged that revived the debate over the transparency of Iran's ongoing nuclear activities. One major suspicion related to indications that Iran was conducting research and development activities using P-2 centrifuges at Lavizan-Shian, a

neighborhood in northeastern Tehran.⁵⁰ The U.S.-based Institute for Science and International Security (ISIS)—a think tank that focuses on nuclear proliferation—publicly released the first satellite images of the Lavizan-Shian site showing that several buildings and laboratories had been razed to the ground and that top soil had been removed.⁵¹ The images suggested that Iran was attempting to conceal its activities from IAEA inspectors. Adding to suspicions, the IAEA had been informed about the possible presence of radiation detection devices, or whole body counters, at Lavizan-Shian. Although the devices were not direct evidence of a nuclear weapons program, their presence was unusual at a site that Iran had not declared as being associated with its nuclear activities.

As a result of this new information, in June 2004 the IAEA requested and received permission from Iran to visit and take environmental samples from Lavizan-Shian. It also requested an explanation on the activities performed by the Physics Research Center (PHRC), a facility at Lavizan-Shian later suspected by the IAEA of involvement in possible nuclear weaponization efforts, including alleged studies on the so-called “Green Salt” project, high explosives testing, and a missile reentry vehicle.⁵² In a report circulated to the IAEA Board in September 2004, ElBaradei stated that Iranian authorities had explained that several military-related institutions had been based at Lavizan-Shian since 1989 but that no nuclear activities had been carried out at the site.⁵³ The site was razed in 2004, Iranian authorities claimed, in response to a decision made in connection with a dispute between the municipality of Tehran and the Ministry of Defense. Environmental samples taken from Lavizan-Shian showed no evidence of nuclear material, although ElBaradei pointed out that the detection of nuclear material would be “very difficult in light of the razing of the site.”⁵⁴ The IAEA, meanwhile, was quietly investigating another lead, publicly disclosed by ISIS, about a military complex called Parchin, located southeast of Tehran, that was possibly being used for nuclear weapons-related research.⁵⁵ According to ElBaradei, the IAEA was aware that Parchin was a military production facility, but it had no evidence that Iran was conducting nuclear-related activities there.⁵⁶ The IAEA sought access to Parchin, but Iran initially denied its requests.⁵⁷

By September 2004, the IAEA’s investigation of Iran had reached a delicate phase. Although the Agency’s referral of Iran to the UNSC was supported by the United States and gradually by the E-3, China and Russia remained strongly opposed. After extensive deliberation in the IAEA Board, on September 18, member states adopted a resolution, drafted by the E-3, stating that the Board would reconvene in November 2004 to “decide whether or not further steps are appropriate”—an implicit threat to find Iran in non-compliance if it refused to fully cooperate with the IAEA.

Nuclear Negotiations Resume: The Paris Agreement

Outside the auspices of IAEA headquarters, Iran and the E-3 were pursuing a new round of negotiations ahead of the Board's next meeting. The United States did not openly oppose the negotiations. On November 14, 2004, a day before ElBaradei circulated his report on Iran to the IAEA Board, Iran and the E-3, now with the support of the High Representative for the European Union, Javier Solana, concluded the Europe-Iran Agreement, also known as the Paris Agreement.⁵⁸ The Paris Agreement called for negotiations to be launched by a European-Iranian steering committee, which was responsible for setting up working groups on political and security issues, technology and economic cooperation, and nuclear issues, aimed at reaching a long-term framework with Iran to resolve the dispute over its nuclear program.⁵⁹

With fresh hopes for a solution, ElBaradei reported on November 15 that Iran had voluntarily agreed to suspend "all enrichment-related and reprocessing activities," this time taking greater care to specify the scope of suspension, including:

- the manufacture and import of gas centrifuges and their components
- the assembly, installation, testing, or operation of gas centrifuges
- work to undertake any plutonium separation, or to construct or operate any plutonium separation installation, and all tests or production at any uranium conversion installations.⁶⁰

The agreement was made in time for the IAEA Board meeting on November 25. Iran agreed to the moratorium on the condition that the E-3 would not support U.S.-led efforts to refer Iran to the UNSC.⁶¹ The IAEA Board welcomed the Paris Agreement, stating in its resolution that Iran's "policy of concealment up to October 2003 resulted in many breaches of its obligations to comply with the NPT," but again deferred a formal finding of non-compliance in favor of a negotiated agreement.⁶² The United States detailed its objections to the resolution in a nine-page explanation of vote.⁶³

Toward a Formal Finding of Non-Compliance

In keeping with the Paris Agreement, during the first half of 2005 no written IAEA safeguards reports on Iran were issued by ElBaradei to the IAEA Board for the first time in 2 years.⁶⁴ ElBaradei, with the support of the E-3, decided that oral reports would suffice.⁶⁵ In February, President George W. Bush visited Europe to quell speculation of an imminent military strike against Iran's nuclear facilities and indicate his willingness to join the European Union in offering Iran

incentives to roll back its nuclear program.⁶⁶ In addition, the United States offered to lift the block on Iran's membership to the World Trade Organization as an incentive for Iran to comply with its safeguards agreement. Negotiations between Iran and the E-3 progressed slowly, however, and the convergence of the U.S. and European approaches appeared to have little impact on Iran's determination to resume its enrichment program. On March 2, 2005, after a meeting with Iranian officials, ElBaradei held a press conference to reassure the public. "We are making good progress" in verifying Iran's nuclear program, ElBaradei said, but "the ball is very much in Iran's court to come clean through absolute transparency measures and cooperation" with the IAEA.⁶⁷

On March 23, Iran presented a new offer to the E-3 providing an incremental and phased approach of "objectives guarantees" that would allow Iran to immediately restart uranium conversion and maintain a limited enrichment program.⁶⁸ Even while studying the Iranian proposal, France, Germany, and the United Kingdom insisted publicly that they remained united in their position that Iran must agree to a permanent suspension of its enrichment program.⁶⁹ The E-3 therefore struggled to find a formula that would keep talks going without retreating on its position over the enrichment issue. To show its dissatisfaction with the pace of stalled negotiations, on May 9 Iran announced that it had completed its process of feeding about 37 metric tons of natural uranium, or yellowcake, into the uranium conversion facility at Isfahan for testing purposes.⁷⁰ Although the E-3 had agreed that Iran could complete the conversion before its suspension as part of the November 2004 Paris Agreement, the move triggered an invitation to talks in Geneva that Iran described as a "last chance" for the Europeans to offer sufficient incentives for halting the resumption of its uranium conversion and enrichment activities.⁷¹ To avoid referral to the UNSC, Iran ultimately agreed to suspend further uranium processing and uphold the Paris Agreement until the end of the summer of 2005.

The situation changed dramatically after Mahmoud Ahmadinejad, the mayor of Tehran, won Iran's presidential election in June 2005. On July 27, departing President Khatami said that Iran would "definitely resume [uranium conversion] work in Isfahan, regardless of Europe's position."⁷² Within days of Ahmadinejad's formal inauguration, Iran decided to remove IAEA seals and resume uranium conversion activities at Isfahan, thereby nullifying the Paris Agreement. ElBaradei urged all parties to continue the negotiating process: "I would request all parties to exercise maximum restraint, to desist from taking any unilateral action and try to go back to where we were a week ago."⁷³ The IAEA Board immediately adopted a resolution by consensus urging Iran to reestablish full suspension of all enrichment-related activities and reinstate IAEA seals that were removed at the Isfahan uranium conversion facility. The

resolution set September 3 as the date by which ElBaradei would provide a complete report on the implementation of Iran's NPT safeguards agreement.

The September 2005 IAEA safeguards report listed all of Iran's past safeguards violations since November 2004. Based on analysis of environmental samples, the IAEA assessed that its findings of HEU contamination were reasonably compatible with Iranian claims that it had originated from centrifuge components as part of a transaction with the A.Q. Khan network. However, the IAEA was unable to establish a definitive conclusion regarding all contamination and could not verify Iranian statements concerning its efforts to import, manufacture, and use P-1 and P-2 centrifuge designs. Although the IAEA made repeated requests for additional information on a range of activities, Iranian cooperation fell short, including in providing access to equipment and information related to the Lavizan-Shian and Parchin sites. After 2 and a half years of intensive investigation, ElBaradei once again called on Iran to expand its transparency and confidence-building measures to "compensate for the confidence deficit" created by two decades of its clandestine nuclear activities.⁷⁴

At the meeting of the IAEA Board later that month, the E-3 proposed a draft resolution with the support of the United States, Australia, Canada, Japan, and other like-minded countries calling for Iran to be referred to the UNSC. Iran threatened to withdraw from the NPT and claimed it would refuse to sell oil to countries that supported the resolution.⁷⁵ China and Russia, in particular, argued that the Iran nuclear dossier could be resolved within the IAEA and opposed its referral to the UNSC. Unwilling to break the Spirit of Vienna by forcing a vote without China and Russia, the E-3 decided to amend the draft resolution to find Iran in non-compliance with its safeguards agreement but removed all references to IAEA referral of Iran to the UNSC.⁷⁶ Having secured the support of China and Russia, on September 24 the IAEA Board passed a resolution 22-1 with 12 abstentions declaring, for the first time, that Iran's "many failures and breaches of its obligations to comply with its safeguards agreement [as had been reported by ElBaradei in November 2003] constitute non-compliance in the context of Article XII.C" of the IAEA Statute.⁷⁷ The resolution noted that Iran's nuclear activities gave "rise to questions that are within the competence of the UNSC." Only Venezuela, a NAM member and stalwart ally of Iran, voted against the resolution. Commenting on the IAEA Board's action, ElBaradei announced, "Everyone acknowledged that the issue remains very much here in Vienna . . . I regret, of course, that the resolution has not been adopted by consensus as is customary here."⁷⁸ Although agreement was reached on finding Iran in non-compliance, the Spirit of Vienna was broken by differences over the referral of Iran to the UNSC. It was at least clear that one phase of the nuclear crisis had ended and another had begun.

The Aftermath: Referral to the UN Security Council

In October and November 2005, a new development emerged concerning the possible military dimension of Iran's nuclear program. Iranian authorities disclosed to the IAEA documentation reflecting an offer made to Iran in 1987 for centrifuge components and equipment by intermediaries affiliated with the A.Q. Khan network.⁷⁹ Among over 60 documents made available by Iran was a 15-page document describing procedures for the casting and machining of enriched uranium metal into hemispherical forms "related to the fabrication of nuclear weapon components."⁸⁰ Iranian authorities maintained that the uranium metal document had been provided on the initiative of the A.Q. Khan network and not at the request of the AEOL.

Despite the bad omen, the IAEA Board decided against a referral of Iran to the UNSC at its meeting on November 24, 2005, in favor of exploring a Russian proposal for the establishment of a joint venture with Iran to operate a uranium enrichment facility located on Russian territory.⁸¹ In an effort to broaden the basis for international consensus, the United States, at the E-3's request, agreed to support the Russian proposal and allow Iran a short period to weigh a possible compromise. But Iran rejected the plan and reaffirmed its intention to conduct enrichment within the country.⁸² On January 3, 2006, Iran informed the IAEA of its decision to resume nuclear research and development activities and soon began to remove IAEA seals covering P-1 centrifuge components and equipment at Natanz and other enrichment-related facilities.⁸³ On February 2, the IAEA Board decided to hold a special session in Vienna to draft a resolution, sponsored by the E-3, calling for Iran to be referred to the UNSC. Three days later, the IAEA Board passed a resolution 27-3 with 5 abstentions requesting ElBaradei to report Iran to the UNSC for non-compliance with its NPT safeguards agreement.⁸⁴ March 6 was set as the date for the case to be taken up by the UNSC. Cuba and Syria, the only two countries to join Venezuela in voting against the resolution, were both NAM members that joined the IAEA Board in 2006 but had not been present in the voting membership of the Board in September 2005. Other NAM members that had joined the IAEA Board in 2006 but decided to vote in favor of Iran's referral to the UNSC included Colombia and Egypt. Others including Brazil, China, Russia, Sri Lanka, and Yemen changed their position from abstaining in September 2005 to voting in favor of the February 2006 resolution.⁸⁵

The immediate reactions in Tehran to the IAEA Board's vote were predictably angry. Iran responded by ending implementation of its Additional Protocol, thus limiting the ability of the IAEA to conduct its verification activities of Iran's nuclear program. Negotiations for nuclear cooperation between Iran and Russia continued unabated, although it was clear that Iran would

not accept a Russian—nor any other—proposal that would transfer Iran’s uranium enrichment activities to another country. Four days after the IAEA Board’s vote to refer Iran to the UNSC, Iranian President Ahmadinejad addressed a ceremony in Tehran marking the 27th anniversary of the 1979 Islamic Revolution. “So far, the Islamic Republic of Iran has been after nuclear research based on the NPT and within the rules of the IAEA,” he said, “but if you want to violate the Iranians’ right with the same regulations, you should know that the Iranians would revise their policies.”⁸⁶ Iran would not suddenly withdraw from the NPT, Ahmadinejad assured, but his remarks hinted that his new administration, apparently with the blessing of Supreme Leader Ali Khamenei, had already decided that Iran’s right to enrichment would be realized not through negotiations, but through resistance.⁸⁷

Epilogue

Concerns within the IAEA Board of Governors about escalating the dispute over Iran’s nuclear program resulted in two unintended consequences. First, the failure to formally declare Iran in non-compliance in November 2003 effectively delayed the ability of the UNSC to adopt a resolution—without necessarily implementing sanctions—under Chapter VII of the UN Charter, which would have made the hitherto voluntary suspension of Iran’s enrichment-related and reprocessing activities legally binding. Ironically, the decision to delay a formal finding of non-compliance enabled Iran to advance its nuclear capabilities: in 2003, the Isfahan uranium conversion facility was not yet operational, Iran did not possess a significant stock of UF₆, and no enriched uranium had been produced at the Natanz enrichment plant. Only 2 years later, Iran had conducted experiments to acquire expertise for nearly every aspect of the nuclear fuel cycle and produced enriched uranium at Natanz.

Second, the handling of the Iran case by ElBaradei and the IAEA Board made it politically impossible to declare other states—Libya (2004), South Korea (2004), and Egypt (2005)—in non-compliance where safeguards violations had occurred. In the case of Libya, ElBaradei omitted the term non-compliance in his February 2004 safeguards report to the IAEA Board even after Libya had admitted in 2003 to having worked on an undeclared nuclear weapons program for 20 years. The resolution adopted in March 2005 by the IAEA Board resolved to report Libya to the UNSC “for information purposes only” due to Libya’s full and proactive cooperation with the IAEA. The Board could have taken a similar course in November 2003 and reported Iran to the UNSC “for information purposes only,” thus leaving open the option to adopt sanctions at a later stage. The Board chose not to take this course, however, and decided instead to endorse the Joint Declaration issued by the E-3 in Tehran in October 2003.

In the absence of a statutory definition of non-compliance, the question of whether the IAEA Board should adopt guidelines to assist in its non-compliance determinations has been the subject of debate.⁸⁸ Some have suggested that the development of guidelines could assist the Board in clarifying issues and ensure the consistency and credibility of its non-compliance determinations.⁸⁹ Others have argued that too much guidance could limit the political discretion afforded to the Board in dealing with safeguards violations on a case-by-case basis.⁹⁰ In not adhering to the principle of “zero tolerance”—which ElBaradei himself argued in November 2002 should be the IAEA standard in all cases of non-compliance⁹¹—the handling of the Iran case risked politicizing what should have remained the purely technical work of the IAEA Secretariat. The experience with Iran underscores that, while the IAEA’s ability to verify compliance with NPT safeguards agreements ideally relies on the full cooperation of the state in question, this cooperation will not always be forthcoming. Under these circumstances, the commitment of IAEA member states to uphold the integrity of the Agency’s safeguards system becomes particularly important to ensure that the IAEA can draw timely conclusions based on technical and legal facts.

Appendix 1: An Overview of the IAEA

The IAEA's programs and budget are set through the decisions of its policymaking bodies—the Board of Governors and the General Conference. The IAEA Secretariat—the Agency's technical arm—is charged with the responsibility of implementing the Agency's programs and activities.

Board of Governors. The 35-member Board of Governors, the IAEA's main policymaking body, generally meets five times per year—in March and June, twice in September (before and after the General Conference), and in December. It provides overall policy direction and oversight of the IAEA's programs and budget, approves safeguards agreements concluded with states, and appoints the Director General with the approval of the General Conference. In case the Director General reports breaches or failures of a state's obligations to comply with its NPT safeguards agreement, the IAEA Board will have to decide whether non-compliance has occurred. The Board must then report the non-compliance to the UN Security Council and the General Assembly possibly “for information purposes only” if the state fully cooperates with the IAEA in resolving all discrepancies and has complied with all of the Board's requests.

General Conference. The General Conference, consisting of all IAEA member states, meets annually—typically in September—to consider the Board of Governors' reports for the previous year and to approve the IAEA's programs and budget. It also approves the nomination of the Director General and has the authority to request reports from the Board of Governors on any issue in question.

Secretariat. With over 2,300 professional support staff, the IAEA Secretariat is responsible for implementing the Agency's programs and activities, including the detection of safeguards violations by member states. The Secretariat is headed by the Director General, the chief administrative officer, and comprises six major departments ranging from safeguards to nuclear safety and security.

Source: <http://www.iaea.org/About/Policy/>

Appendix 2: Chronology of Key Events (2002–2006)

2002

- August 14 Alireza Jafarzadeh of the National Council of Resistance of Iran (NCRI) publicly reveals the existence of undeclared nuclear facilities under construction in Iran.
- September 16 Gholam Reza Aghazadeh, Iranian Vice President and President of the Atomic Energy Organization of Iran (AEOI), addresses the country's intentions to further develop its nuclear fuel cycle at the IAEA General Conference.

2003

- February 21–22 IAEA Director General Mohamed ElBaradei visits Iran for talks with Iranian President Mohammad Khatami on the country's nuclear program.
- March 20 U.S.-led invasion of Iraq commences.
- June 16–20 IAEA Board of Governors convenes to discuss the implementation of Iran's NPT safeguards agreement and endorses the Chairman's Conclusion calling on Iran to "cooperate fully" with the IAEA.
- September 8–12 IAEA Board adopts a resolution calling on Iran to suspend "all further uranium enrichment-related activities," but stops short of declaring Iran in non-compliance with its safeguards agreement.
- October 21 Tehran Joint Declaration is announced by the Iranian Government and the foreign ministers of France, Germany, and the United Kingdom (E-3) to work toward resolving concerns over Iran's nuclear program and, inter alia, to suspend enrichment activities.
- November 20–26 IAEA Board adopts a resolution deploring "Iran's past failures and breaches" of its safeguards obligations, but welcomes the Tehran Joint Declaration and "Iran's offer of active cooperation and openness."
- December 18 Iran signs an Additional Protocol to its safeguards agreement granting the IAEA greater authority in verifying the country's nuclear program.
- December 19 Libya announces decision to disclose and dismantle its nuclear, biological, and chemical weapons programs.

2004

- March 8–13 IAEA Board adopts its third resolution since September 2003, noting “out-standing issues” concerning Iran’s nuclear program.
- June 14–18 IAEA Board adopts a resolution deploring Iran’s “lack of full, timely, and proactive” cooperation. Director General ElBaradei asks Iran to provide access to the Lavizan-Shian site in Tehran suspected of involvement in un-declared nuclear activity.
- June 23 Iran informs ElBaradei of its decision to restart the fabrication and testing of centrifuges.
- September 13–18 IAEA Board adopts a resolution expressing regret that Iran reversed its vol-untary decision to suspend enrichment and reprocessing activities.
- November 14 Iran and the E-3 sign the Paris Agreement reaffirming the commitments of the Tehran Joint Declaration, expanding Iran’s agreement to the suspension of all enrichment-related activities and deciding “to move forward, build-ing on that agreement.”
- November 25–29 IAEA Board adopts a resolution reaffirming “its strong concern that Iran’s policy of concealment up to October 2003 has resulted in many breaches of Iran’s obligations,” but welcomes Iran’s decision to continue and extend its suspension of all enrichment-related and reprocessing activities.

2005

- February 23 President George W. Bush dismisses speculation of a U.S. attack on Iran.
- March 1 IAEA Board is updated by Deputy Director General Pierre Goldschmidt, Head of the Department of Safeguards, on the status of the Agency’s verifi-cation work in Iran since November 2004.¹
- March 23 Iran presents a proposal to the E-3 providing greater detail into the “objec-tive guarantees” Iran is willing to discuss regarding its nuclear program.
- June 16 IAEA Board is updated by Deputy Director General Goldschmidt on the status of the Agency’s verification work in Iran.²
- July 27 Departing President Khatami says Iran will resume uranium conversion activities at Isfahan regardless of European incentives.
- August 2 President Khatami steps down. Mahmoud Ahmadinejad succeeds him.

August 8	Iran requires the removal of IAEA seals to the Isfahan uranium conversion facility and resumes activities, effectively nullifying the Paris Agreement.
August 9–11	IAEA Board adopts a resolution urging Iran to suspend uranium conversion and reinstate IAEA seals removed at the Isfahan facility.
September 19–24	IAEA Board adopts a resolution declaring that Iran’s “many failures and breaches . . . constitute non-compliance” and calling on Iran to return to the negotiating process.
November 18–24	IAEA Board discusses the verification of Iran’s nuclear program and agrees to explore a Russian proposal to “broaden consensus” rather than refer Iran to the UN Security Council (UNSC).

2006

January 3	Iran informs the IAEA of its decision to resume research and development of nuclear energy for peaceful purposes.
January 10	Iran begins to remove IAEA seals at several enrichment-related sites.
February 2–4	IAEA Board holds a special meeting on Iran and adopts a resolution calling for ElBaradei to refer Iran to the UNSC for non-compliance.
March 6–10	IAEA Board meets in regular session. ElBaradei transmits his report on Iran’s nuclear program to the UNSC.

¹“Statement to the IAEA Board of Governors,” March 1, 2005, available at <www.iranwatch.org/international/IAEA/iaea-goldschmidt-statement-030105.htm>.

²“Statement of the DDG-SG on June 16, 2005 at the Board of Governors’ Meeting,” available at <www.fas.org/nuke/guide/iran/nuke/iaea0605.pdf>.

Notes

¹ Jafarzadeh claimed that the Atomic Energy Organization of Iran (AEOI) had established a number of private companies to acquire equipment and conduct research and development activities associated with its uranium enrichment program. In his original announcement on August 14, 2002, Jafarzadeh omitted any reference to the specific type of nuclear facility under construction at Natanz, but identified the Arak site as a “heavy water project.” In December 2002, the U.S.-based Institute for Science and International Security (ISIS) released the first satellite images of the two nuclear sites and was the first to publicly identify the Natanz site as a “gas centrifuge uranium enrichment plant.” See “Experts Believe Iran May Be Developing Nuclear Capabilities,” *CNN*, December 13, 2002, available at <<http://transcripts.cnn.com/TRANSCRIPTS/021213/lol.07.html>>. For a full transcript of Jafarzadeh’s remarks and other allegations made by the National Council of Resistance of Iran (NCRI) about Iran’s WMD-related activities between 2002 and 2006, see “New Information on Top Secret Projects of the Iranian Regime’s Nuclear Program,” August 14, 2002, available at <www.iranwatch.org/privateviews/NCRI/perspex-ncri-topsecretprojects-081402.htm>; and “List of Revelations on Iran’s Nuclear & WMD Activities by the Iranian Opposition since 2002,” Nuclear Control Institute, available at <www.nci.org/06nci/01-31/Revelations.htm>.

² The International Atomic Energy Agency (IAEA) is widely recognized by state parties of the Nuclear Non-Proliferation Treaty (NPT) as the sole competent authority for verifying and assuring that states comply with their NPT safeguards agreements. Article III of the NPT charges the IAEA with the responsibility for administering international safeguards to verify that non-nuclear-weapon states party to the NPT do not divert civilian nuclear power programs to weapons purposes. For a history of the IAEA see David Fischer, *History of the International Atomic Energy Agency: The First Forty Years* (Vienna: IAEA, 1997); and Lawrence Scheinman, *The International Atomic Energy Agency and World Nuclear Order* (Washington, DC: Resources for the Future, Inc., 1987).

³ Mark Hibbs, “U.S. Briefed Suppliers Group in October in Suspected Iranian Enrichment Plant,” *Nuclear Fuel* 27, no. 26, December 23, 2002. On December 14, 2002, IAEA Director General Mohamed ElBaradei confirmed that the IAEA knew about Iran’s undeclared nuclear activities circa June 2002. “Iran to Invite U.N. Nuclear Experts to Visit Two Plants,” *Associated Press*, December 14, 2002, available at <www.foxnews.com/story/0,2933,73003,00.html>. Additionally, in February 2004, George J. Tenet, Director of Central Intelligence for the U.S. Central Intelligence Agency, stated, “I want to assure you that recent Iranian admissions about their nuclear programs validate our intelligence assessments. It is flat wrong to say that we were ‘surprised’ by reports from the Iranian opposition [NCRI] last year.” See “Remarks as Prepared for Delivery by DCI George J. Tenet at Georgetown University,” February 5, 2004, available at <www.cia.gov/news-information/speeches-testimony/2004/tenet_georgetown_speech_02052004.html>.

⁴ See appendix 1 of this study for an overview of the IAEA’s Secretariat and policymaking bodies.

⁵ While not a legally authoritative account, the *IAEA Safeguards Glossary* describes non-compliance as a “violation by a state of its safeguards agreement with the IAEA” and provides several examples including “the failure to declare nuclear material” and the “obstruction of the activities of IAEA inspectors.” *IAEA Safeguards Glossary* (2001 Edition), International Nuclear Verification Series No. 3, 11–12.

⁶ “Statement by H.E. Reza Aghazadeh, Vice President of the Islamic Republic of Iran and President of the Atomic Energy Organization of Iran, at the 46th General Conference of the International Atomic Energy Agency,” September 16, 2002, 3, available at <www.iaea.org/About/Policy/GC/GC46/iran.pdf>.

⁷ Mohamed ElBaradei, *The Age of Deception: Nuclear Diplomacy in Treacherous Times* (New York: Metropolitan Books, 2011), 112–113.

⁸ Ibid., 113. According to ElBaradei, Iran provided a “long list of excuses” for postponing the visit.

⁹ The swiping of equipment and building structures to test for traces of radioactive nuclear material.

¹⁰ The IAEA Board of Governors decided to replace the original Code 3.1 in February 1992 after the discovery of Iraq’s undeclared nuclear program. See, for example, Pierre Goldschmidt, “Concrete Steps to Improve the Nonproliferation Regime,” Carnegie Paper No. 100, April 2009, available at <http://carnegieendowment.org/files/improve_nonpro_regime.pdf>.

¹¹ ElBaradei, *Age*, 117.

¹² “Director General’s Intervention on Iran during the IAEA Board of Governors Meeting,” June 18, 2003, available at <www.iaea.org/newscenter/pressreleases/2003/dgiran180603.pdf>; and IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2003/40, June 6, 2003, available at <www.iaea.org/Publications/Documents/Board/2003/gov2003-40.pdf>.

¹³ IAEA Media Advisory, “Statement by the Board, 19 June 2003 (Issued by the Chairwoman),” available at <www.iaea.org/newscenter/mediaadvisory/2003/medadvise200372.html>; and Jean du Preez and Lawrence Scheinman, “Iran Rebuked for Failing to Comply with IAEA Safeguards,” James Martin Center for Nonproliferation Studies, June 18, 2003, available at <<http://cns.miis.edu/stories/030618.htm>>.

¹⁴ IAEA Media Advisory, “IAEA Comments on Safeguards in Iran,” August 27, 2003, available at <www.iaea.org/newscenter/mediaadvisory/iran/ma_iran_2708.html>.

¹⁵ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2003/63, August 26, 2003, available at <www.iaea.org/Publications/Documents/Board/2003/gov2003-63.pdf>.

¹⁶ In addition, against the request of the IAEA Board, in late June 2003 Iran introduced uranium hexafluoride (UF₆) into its first centrifuge at the Natanz pilot enrichment plant for testing purposes. Ibid., 7, paragraph 33.

¹⁷ Ibid., 10, paragraph 52.

¹⁸ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2003/69, September 12, 2003, available at <www.iaea.org/Publications/Documents/Board/2003/gov2003-69.pdf>.

¹⁹ Rebecca Johnson, “IAEA Adopts Critical Resolution in Deepening Crisis over Iran’s Nuclear Program,” *Disarmament Diplomacy*, no. 73, October–November 2003, available at <www.acronym.org.uk/dd/dd73/73news02.htm>.

²⁰ Ibid.

²¹ Ibid.

²² “E-3” vice “EU-3” because the three European foreign ministers at least initially represented their own countries and not the entire European Union (EU). See Christer Ahlström, *Europe and Iran: Perspectives on Non-Proliferation* (Oxford: Oxford University Press, 2005), 27.

²³ Ewen Macaskill and Dan De Luce, “EU Ministers Strike Iran Deal,” *The Guardian*, October 21, 2003, available at <www.guardian.co.uk/world/2003/oct/22/iran.politics1>.

²⁴ For the full text of the agreement, see “Statement by the Iranian Government and Visiting EU Foreign Ministers,” October 21, 2003, available at <www.iaea.org/newscenter/focus/iaeaيران/statement_iran21102003.shtml>.

²⁵ Ibid.

²⁶ Authors’ emphasis.

²⁷ ElBaradei, *Age*, 140.

²⁸ Seyed Hossein Mousavian, *The Iranian Nuclear Crisis: A Memoir* (Washington, DC: Carnegie Endowment for International Peace, 2012), 101.

²⁹ ElBaradei, *Age*, 140–141.

³⁰ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2003/75, November 10, 2003, 4, available at <www.iaea.org/Publications/Documents/Board/2003/gov2003-75.pdf>.

³¹ Ibid., Annex 1, paragraph 25.

³² Macaskill and De Luce, *The Guardian*, October 21, 2003.

³³ IAEA, GOV/2003/75, 8–9.

³⁴ Ibid., 10.

³⁵ ElBaradei, *Age*, 145–146.

³⁶ Joe Fiorill, “IAEA Governors Accept Iran’s Additional Protocol; Talks on Resolution Delayed,” *Global Security Newswire*, November 21, 2003, available at <www.nti.org/gsn/article/iaea-governors-accept-irans-additional-protocol-talks-on-resolution-delayed/>.

³⁷ The NAM Kuala Lumpur Declaration of 2003 called for “enhancing . . . coordination and cooperation through regular meetings of the Co-ordinating Bureau in New York, as well as in Geneva, Vienna and Nairobi and other centres, if necessary, with the view to responding, on a timely basis, to international developments affecting the Movement and its members.” See “Meeting of the Ministers of Foreign Affairs of the Non-Aligned Movement at the 58th Session of the General Assembly of the United Nations,” NAM/FMM/GA58/Chair/Report, September 26, 2003, New York, available at <www.un.int/malaysia/NAM/RptNAMActFMM26Sept03.html>. For the full text of official statements made by NAM on Iran’s nuclear program from 2002 to 2005, see Annex 2 of “Communication Dated 12 September 2005 from the Permanent Mission of the Islamic Republic of Iran to the Agency,” INFCIRC/657, September 15, 2005, available at <www.iaea.org/Publications/Documents/Infcircs/2005/infirc657.pdf>.

³⁸ See Yvonne Yew, “Diplomacy and Nuclear Non-Proliferation: Navigating the Non-Aligned Movement,” Harvard Kennedy School Discussion Paper 2011-07, June 2011, available at <<http://belfercenter.ksg.harvard.edu/files/Yew-Diplomacy%20and%20Nuclear%20Non-Proliferation.pdf>>; Tanya Ogilvie-White, “International Response to Iranian Nuclear Defiance: The Non-Aligned Movement and the Issue of Non-Compliance,” *The European Journal of International Law* 18, no. 3; and Mousavian, 83–87.

³⁹ On December 19, 2003, the Libyan Government announced its decision “to eliminate . . . materials, equipments and programs which lead to the production of internationally proscribed weapons.”

⁴⁰ Ian Traynor, “UN Atomic Energy Agency Puts Heat on Iran,” *The Guardian*, March 10, 2004, available at <www.guardian.co.uk/world/2004/mar/11/iran.usa>.

⁴¹ ElBaradei, *Age*, 128–129.

⁴² *Ibid.*, 129.

⁴³ Pakistan was not explicitly identified in the IAEA report.

⁴⁴ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2004/34, June 1, 2004, 5, available at <www.iaea.org/Publications/Documents/Board/2004/gov2004-34.pdf>.

⁴⁵ Mohamed ElBaradei, “Introductory Statement to the Board of Governors,” June 14, 2004, available at <www.iaea.org/newscenter/statements/2004/ebsp2004n003.html>.

⁴⁶ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2004/49, June 18, 2004, available at <www.iaea.org/Publications/Documents/Board/2004/gov2004-49.pdf>.

⁴⁷ “Statement by the Non-Aligned Movement,” Delivered by H.E. Hussein Haniff at the IAEA Board of Governors Meeting, June 18, 2004, available at <www.dfa.gov.za/foreign/Multilateral/inter/iaea_iran/200406_nam_statement.doc>.

⁴⁸ Stephen Pullinger, “Libya, Iraq and Iran: Updates and Analyses,” *Disarmament Diplomacy*, no. 77, May/June 2004, available at <www.acronym.org.uk/dd/dd77/77iran.htm>.

⁴⁹ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2004/60, September 1, 2004, 3, available at <www.iaea.org/Publications/Documents/Board/2004/gov2004-60.pdf>.

⁵⁰ Reference to the Lavizan-Shian site was made during the June 2004 IAEA Board meeting. Lavizan-Shian first came to public attention in May 2003 when the NCRI announced that the site, called the Lavizan-Shian Technological Research Center, was associated with biological weapons research. In April 2004, Mohammad Mohaddessin, Chairman of the NCRI Foreign Affairs Committee, stated that Iran had conducted “P2 research” under the auspices of the “Center for Readiness and New Defense Technology” at Lavizan-Shian in Tehran. See “Iranian Regime’s Programs for Biological and Microbial Weapons,” press briefing by Soona Samsani and Alireza Jafarzadeh, May 15, 2003, available at <www.iranwatch.org/privateviews/NCRI/perspex-ncri-cbw-051503.htm>; and “Supervision of Military Organs on Mullahs’ Nuclear Weapons Program,” text of press conference held in Brussels by Mohammad Mohaddessin, April 28, 2004, available at <www.iranwatch.org/privateviews/NCRI/perspex-ncri-militarynuclear-042804.htm>.

⁵¹ The satellite images were first taken in August 2003 and again in May 2004. Jacqueline Shire, “Is Iran Still Hiding Nuclear Activities?” *ABC News*, June 18, 2004, available at <<http://abcnews.go.com/WNT/Investigation/story?id=131726&page=1>>; and “ISIS Imagery Brief: Destruction at Iranian Site Raises New Questions about Iran’s Nuclear Activities,” *ISIS*, June 17, 2004, available at <<http://isis-online.org/isis-reports/detail/isis-imagery-brief-destruction-at-iranian-site-raises-new-questions-about-i/>>.

⁵² The first public mention of the alleged nuclear weaponization studies including the Green Salt project appeared in January 2006. See “Developments in the Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran and Agency Verification of Iran’s Suspension of Enrichment-Related and Reprocessing Activities,” Update Brief by the Deputy Director General for Safeguards, January 31, 2006, available at <www.fas.org/nuke/guide/iran/nuke/heinonen31012006.pdf>.

⁵³ IAEA, GOV/2004/60, 8. Iranian authorities explained that the Physics Research Center (PHRC) was established at Lazisan-Shian in 1989 to oversee “preparedness to combat and neutralization of casualties due to nuclear attacks and accidents (nuclear defence) and also support and provide scientific advice and services to the Ministry of Defence.” Iranian authorities noted that the operation of the PHRC was halted in 1998 and the focus of work shifted to “biological R&D and radioprotection activities.” Revelations later made by ISIS contradict Iranian claims that the PHRC’s wide-ranging procurement activities were not related to a nuclear program. See, for example, David Albright, Paul Brannan, and Andrea Stricker, “The Physics Research Center and Iran’s Parallel Military Nuclear Program,” ISIS Report, February 23, 2012, available at <http://isis-online.org/uploads/isis-reports/documents/PHRC_report_23February2012.pdf>.

⁵⁴ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2004/83, November 15, 2004, 22, available at <www.iaea.org/Publications/Documents/Board/2004/gov2004-83.pdf>.

⁵⁵ Jacqueline Shire and Jonathan Karl, “Suspensions Arise about Iran’s Nuclear Program,” *ABC News*, September 15, 2004, available at <<http://abcnews.go.com/WNT/story?id=131422&page=1>>.

⁵⁶ ElBaradei, *Age*, 139.

⁵⁷ It was reported to the IAEA Board in November 2004 (GOV/2004/83) that the Agency had requested access to Parchin to assure the absence of undeclared nuclear material and activities. Such a visit took place in early 2005 but, out of four areas of potential interest, the IAEA was permitted to select just one and was only allowed to visit five buildings.

⁵⁸ “Iran-EU Agreement on Nuclear Programme,” *Mehr News Agency*, November 14, 2004, available at <www.iaea.org/newscenter/focus/iaea/iran/eu_iran14112004.shtml>.

⁵⁹ Shannon N. Kile, ed., “Europe and Iran: Perspectives on Non-Proliferation,” SIPRI Research Report, no. 21, 2005, 16.

⁶⁰ Text of the Paris Agreement, available at <www.iaea.org/newscenter/focus/iaea/iran/eu_iran14112004.shtml>.

⁶¹ Kile, 67.

⁶² IAEA Board Resolution, November 29, 2004, available at <www.iaea.org/Publications/Documents/Board/2004/gov2004-90.pdf>.

⁶³ John R. Bolton, *Surrender Is Not an Option: Defending America at the United Nations and Abroad* (New York: Threshold Editions, 2007), 318. The principal complaint was that the deal did not go far enough, e.g., Iran’s moratorium on enrichment activities was a “voluntary confidence building measure” rather than a legal obligation, and its duration was directly linked to the negotiations between Iran and the E-3 on a broader set of issues.

⁶⁴ The Paris Agreement stipulates that the “E-3/EU will henceforth support the Director General reporting to the IAEA Board as he considers appropriate in the framework of the implementation of Iran’s Safeguards Agreement and Additional Protocol.”

⁶⁵ Then-Deputy Director General Pierre Goldschmidt, Head of the Department of Safeguards, briefed the IAEA Board on March 1, 2005, and again on June 16, 2005. Text of March 1 statement available at <www.iranwatch.org/international/IAEA/iaea-goldschmidt-statement-030105.htm>; and June 16 statement at <www.fas.org/nuke/guide/iran/nuke/iaea0605.pdf>.

⁶⁶ Michael A. Fletcher and Keith B. Richburg, "Bush Tries to Allay E.U. Worry over Iran," *The Washington Post*, February 23, 2005, available at <www.washingtonpost.com/wp-dyn/articles/A43199-2005Feb22.html>.

⁶⁷ IAEA Staff Report, "Safeguards in Iran: IAEA Chief Stresses Need for More Transparency," March 2, 2005, available at <www.iaea.org/newscenter/news/2005/press_briefing020305.html>.

⁶⁸ "Elements of Objective Guarantees," presented by Iran in the meeting of the steering committee in Paris, March 23, 2005, available at <www.armscontrol.org/pdf/20050323_Iran_Proposal_Steering_Cmte.pdf>. For a list of other official proposals, see "History of Official Proposals on the Iranian Nuclear Issue," Arms Control Association, August 2012, available at <www.armscontrol.org/factsheets/Iran_Nuclear_Proposals>.

⁶⁹ "EU Incentives Not Enough for Nuclear Deal, Iran Says," *Global Security Newswire*, April 18, 2005, available at <www.nti.org/gsn/article/eu-incentives-not-enough-for-nuclear-deal-iran-says/>.

⁷⁰ Ali Akbar Dareini, "Iran Confirms Converting 37 Tons of Raw Uranium into Gas," *Associated Press*, May 9, 2005, available at <<http://legacy.utsandiego.com/news/world/20050509-1503-iran-nuclear.html>>. The IAEA subsequently placed the uranium tetrafluoride (UF₄) at Isfahan under Agency seals and calculated that the material unaccounted for as a result of Iran's conversion activities was "less than 1% of the total quantity of material fed into the process, which is within an acceptable range." See IAEA, "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran," GOV/2005/67, September 2, 2005, 13, available at <www.iaea.org/Publications/Documents/Board/2005/gov2005-67.pdf>.

⁷¹ "EU-Iran Nuclear Talks in Geneva Risk Deadlock: Iranian Negotiator," *Agence France-Presse*, May 22, 2005, available at <www.khaleejtimes.com/DisplayArticle.asp?xfile=data/middleeast/2005/May/middleeast_May726.xml§ion=middleeast&col=GOV/2005/6>.

⁷² Nazila Fathi, "Iran's President Says Nuclear Work Will Resume," *The New York Times*, July 28, 2005, available at <www.nytimes.com/2005/07/28/international/middleeast/28iran.html>.

⁷³ IAEA Staff Report, "IAEA Chief Briefs Press on Iran," August 9, 2005, available at <www.iaea.org/newscenter/news/2005/dg_iran.html>.

⁷⁴ Mohamed ElBaradei, "Introductory Statement to the Board of Governors," September 19, 2005, available at <www.iaea.org/newscenter/statements/2005/ebsp2005n009.html>.

⁷⁵ Thérèse Delpech, *Iran and the Bomb: The Abdication of International Responsibility* (New York: Columbia University Press, 2007), 132–133.

⁷⁶ Bolton, 321.

⁷⁷ States that voted for the September 2005 resolution include: Argentina, Australia, Belgium, Canada, Ecuador, France, Germany, Ghana, Hungary, India, Italy, Japan, Netherlands, Peru, Poland, Portugal, Singapore, Slovakia, South Korea, Sweden, United Kingdom, United States; Against: Venezuela; Abstained: Algeria, Brazil, China, Mexico, Nigeria, Pakistan, Russian Federation, South Africa, Sri Lanka, Tunisia, Vietnam, Yemen. See IAEA Board Resolution, September 24, 2005, available at <www.iaea.org/Publications/Documents/Board/2005/gov2005-77.pdf>; and Peter Crail, "Non-Aligned Re-aligning to Confront Iran," *WMD Insights*, no. 3, March 2006, 12.

⁷⁸ IAEA, "Transcript of the Director General's Press Statement on Iran," September 24, 2005, available at <www.iaea.org/newscenter/transcripts/2005/transcr24092005.html>.

⁷⁹ IAEA, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” GOV/2005/87, November 18, 2005, available at <www.iaea.org/Publications/Documents/Board/2005/gov2005-87.pdf>.

⁸⁰ “Update Brief by the Deputy Director General for Safeguards,” January 31, 2006, available at <www.fas.org/nuke/guide/iran/nuke/heinonen31012006.pdf>.

⁸¹ Mark Heinrich and Louis Charbonneau, “Russia Plan for Iran Unites IAEA,” *Reuters*, November 25, 2005, available at <www.turkishweekly.net/news/22351/russian-plan-for-iran-unites-iaea.html>.

⁸² “Iran Insists on Domestic Uranium Enrichment,” *Global Security Newswire*, December 6, 2005, available at <www.nti.org/gsn/article/iran-insists-on-domestic-uranium-enrichment/>.

⁸³ IAEA, “Iran Begins Removal of IAEA Seals at Enrichment-Related Locations,” January 10, 2006, available at <www.iaea.org/newscenter/pressreleases/2006/prn200602.html>.

⁸⁴ States that voted for the February 2006 resolution include: Argentina, Australia, Belgium, Brazil, Canada, China, Colombia, Ecuador, Egypt, France, Germany, Ghana, Greece, India, Japan, Norway, Portugal, Russian Federation, Singapore, Slovakia, Slovenia, South Korea, Sri Lanka, Sweden, United Kingdom, United States, Yemen; Against: Cuba, Syria, Venezuela; Abstained: Algeria, Belarus, Indonesia, Libya, South Africa. See IAEA Board Resolution, February 4, 2006, available at <www.iaea.org/Publications/Documents/Board/2006/gov2006-14.pdf>; and Crail, 12.

⁸⁵ Ogilvie-White, 466.

⁸⁶ “Iran Threat to Revise Nuke Policy,” *CNN*, February 11, 2006, available at <http://articles.cnn.com/2006-02-11/world/iran.nuclear_1_nuclear-program-nuclear-technology-iran-threat?s=PM:WORLD>.

⁸⁷ Mousavian, 190.

⁸⁸ The IAEA Secretariat, in particular its Department of Safeguards, has developed criteria to help inspectors distinguish minor oversights from those violations that should be reported to the Board of Governors as cases of non-compliance. These criteria are described in the *IAEA Safeguards Glossary* (2001 Edition). In contrast, the IAEA Board has not adopted guidelines to assist in its non-compliance determinations.

⁸⁹ See, for example, John Carlson, “Defining Noncompliance: NPT Safeguards Agreement,” *Arms Control Today* 39, May 2009, available at <http://www.armscontrol.org/act/2009_5/Carlson>; and Pierre Goldschmidt, Safeguards Noncompliance: A Challenge for the IAEA and the UN Security Council, *Arms Control Today* 40, January/February 2010, available at <www.armscontrol.org/act/2010_01-02/Goldschmidt>.

⁹⁰ Peter Jenkins, “Staying Credible: How Precedents Can Help the IAEA Get Noncompliance Calls Right,” *Arms Control Today* 40, September 2010, available at <www.armscontrol.org/act/2010_09/Jenkins>.

⁹¹ In addition, ElBaradei suggested that the UNSC could adopt “a smart system of sanctions for dealing with non-compliance.” Speech by Mohamed ElBaradei, U.S. Department of State, November 14, 2002, available at <www.iraqwatch.org/government/US/State/state-elbaradei-111402.htm>.

About the Authors

Nima Gerami is a Research Fellow in the Center for the Study of Weapons of Mass Destruction (WMD) at the National Defense University (NDU). His research focuses on nuclear proliferation and international security with an emphasis on Iran and the broader Middle East. Mr. Gerami lectures in support of WMD elective courses at NDU and regularly serves as a guest instructor at other joint professional military education venues, as well as civilian universities at the graduate level. Before joining NDU, Mr. Gerami was a Research Assistant and Editor in the Nuclear Policy Program at the Carnegie Endowment for International Peace. He also worked in the Bureau of International Security and Nonproliferation at the U.S. Department of State. From 2003 to 2007, Mr. Gerami served as an Assistant to the Executive Director of the Office of International Affairs at the University of Connecticut. His publications have appeared in the *Bulletin of the Atomic Scientists*, *Foreign Policy*, *The Guardian*, *Jane's Intelligence Review*, and *The New Republic*. He received his M.A. in Government from The Johns Hopkins University and B.A. degrees in Political Science and International Studies from the University of Connecticut.

Pierre Goldschmidt is a Nonresident Senior Associate at the Carnegie Endowment for International Peace and was Deputy Director General of the International Atomic Energy Agency (IAEA), Head of the Department of Safeguards, from 1999 to June 2005. Before joining the IAEA, Dr. Goldschmidt was, for 12 years, Director General of SYNATOM, the company responsible for the fuel supply and spent fuel management of seven Belgian nuclear plants. For 6 years, Dr. Goldschmidt was a member of the Directoire of EURODIF, the large French uranium enrichment company. Dr. Goldschmidt is a member of the Board of Directors for the Association Vinçotte Nuclear (AVN), a nonprofit organization charged with promoting the protection of people and the environment against nuclear, industrial, and radiological hazards. He is also a member of the European Nuclear Society's High Scientific Council and has headed numerous European and international committees, including as Chairman of the Uranium Institute in London, the Organisation des Producteurs d'Énergie Nucléaire in Paris, and the Advisory Committee of the EURATOM Supply Agency. In November 2005, Dr. Goldschmidt became Doctor Honoris Causa of the University of Brussels. Among a number of cultural and scientific awards, he has received the 2008 Joseph A. Burton Forum Award of the American Physical Society. Dr. Goldschmidt holds a Ph.D. from the University of Brussels, an M.S. from the University of California, Berkeley, and a B.A. from the University of Brussels.

Center for the Study of Weapons of Mass Destruction

Case Study Series

Case Study 1

President Nixon's Decision to Renounce the U.S. Offensive Biological Weapons Program

by Jonathan B. Tucker and Erin R. Mahan

October 2009

Case Study 2

U.S. Withdrawal from the Antiballistic Missile Treaty

by Lynn F. Rusten

January 2010

Case Study 3

The Origins of Nunn-Lugar and Cooperative Threat Reduction

by Paul I. Bernstein and Jason D. Wood

April 2010

Case Study 4

U.S. Ratification of the Chemical Weapons Convention

by Jonathan B. Tucker

December 2011

Case Study 5

The Presidential Nuclear Initiatives of 1991–1992

by Susan J. Koch

September 2012

For additional information, including requests for publications and instructor's notes, please contact the Center directly at WMDWebmaster@ndu.edu or (202) 685-4234 or visit the Center

Web site at www.ndu.edu/wmdcenter.

